

ABSTRACT OF THE DISCLOSURE

There is a problem in that a possibility of a carrier being caused on an interface between a semiconductor layer and an insulating film is high, and the carrier is injected into
5 the insulating film and the interface between the insulating film and the semiconductor layer, so that a threshold rises. A semiconductor device including: a first gate electrode formed on an insulating surface; a first gate insulating film formed on the first gate electrode; a first semiconductor layer formed on the first gate insulating film; a second semiconductor layer formed on the first semiconductor layer; a third semiconductor layer formed on the second
10 semiconductor layer; a second gate insulating film formed on the third semiconductor layer; and a second gate electrode formed on the second gate insulating film, wherein a channel region in which an intrinsic second semiconductor layer is formed is included between the first semiconductor layer and the third semiconductor layer in each of which an impurity element for imparting one conductivity type is added at the concentration of 1×10^{15} to $1 \times$
15 $10^{17}/\text{cm}^3$.